Burkhardt, Julianne

From: Gary Christopher [gchristopher01@ugf.edu]
Sent: Monday, January 10, 2011 12:39 PM
To: Burkhardt, Julianne
Subject: SB 25 opposition statement
Attachments: SB25 Testimony.docx

Ms. Burkhardt,

Attached is the testimony I would like to have read into the record at today's hearing on SB 25.

Thank you for your assistance.

Just for clarity - I am speaking on this issue as a private citizen, not as a representative of UGF.

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10 January 2011

Mr. Chairman, members of the Senate Committee on Public Health, Welfare, and Safety,

I am a professor of Health and Human Performance at the University of Great Falls. I hold a Ph.D. in Kinesiology and am a member of the American College of Sports Medicine. I am here to express my opposition to SB 25. I am speaking on this issue as a private citizen and not as a representative of UGF.

Obesity is a multifaceted problem with a variety of causes. Chief among these causes, at least in modern society, are poor diet and insufficient physical activity. Monitoring Body Mass Index (BMI) among school children, as this bill would require, will not correct these problems. Monitoring will only tell us what we already know – that we, as a state and nation, carry too much weight.

The BMI is used inappropriately, and has been since its conception in 1832. Adolphe Quetelet (ket(-ə)-lā) derived the equation from data collected in anthropometric studies aimed at defining the "normal man." Quetelet never intended his index to be used to ASSESS individuals. Its use, to him, was to DESCRIBE the relationships he found during his research.

In 1972, obesity researcher Ancel Keys found that Quetelet's index, which Keys named the Body Mass Index, provided the best correlation to body-fat percentage of all available formulas then in use. However, Keys never intended for BMI to be used to diagnose individuals into weight categories. He cautioned that BMI ignores factors of gender and age which, along with weight, affect overall health. Keys argued that it was irresponsible to label individuals based on a single number without regard to other factors.

The biggest drawback to the use of BMI to estimate body-fatness is that it does not distinguish between fat mass and fat-free mass, nor do the categories account for variable proportions of muscle, fat, bone, cartilage, and water weight between men & women and adults & children. I personally know several NFL offensive and defensive linemen who have BMI values in the overweight or obese range, yet have perfectly acceptable body-fat percentages. In this regard, the Centers for Disease Control and Prevention provide us with the following precautions:

- "…some individuals may have a high BMI but not have a high percentage of body fat. For example, highly trained athletes may have a high BMI because of increased muscularity rather than increased body fatness."
  http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html
- "…BMI is not a diagnostic tool. …a child may have a high BMI for age and sex, but to determine if excess fat is a problem, a health care provider would need to perform further assessments."
  http://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/about_childrens_bmi.html
- "It is also important to remember that BMI is only one factor related to risk for disease. For assessing someone's likelihood of developing overweight- or obesity-related diseases,

the National Heart, Lung, and Blood Institute guidelines recommend looking at two other predictors: 1. The individual's waist circumference (because abdominal fat is a predictor of risk for obesity-related diseases). 2. Other risk factors the individual has for diseases and conditions associated with obesity (for example, high blood pressure or physical inactivity)." http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html

The current BMI "cutoff" scores used by various national and world organizations are not based on any scientific research, but are arbitrary numbers that have been changed several times in the past 30 years. Between 1980 and 2000 the U.S. Dietary Guidelines have defined overweight at a variety of levels ranging from a BMI of 24.9 to 27.1. The National Institutes of Health (NIH) consensus conference of 1985 recommended that overweight be set at a BMI of 27.8 for men and 27.3 for women. In 1998 a NIH report concluded that a BMI over 25 is overweight and a BMI over 30 is obese. By contrast, in Japan, a BMI of 23.0 to 24.9 is considered overweight, while BMI of 25 or higher is considered obese. In Singapore, BMI from 23 to 27.5 is considered overweight, with the obese category beginning at a BMI of 27.6.

Apart from mandating the use of a controversial and questionable tool, this bill provides no corrective action. If enacted, what will be done if a particular school or school district is found to have high "aggregate BMI" numbers? This is a bill without any "teeth" – its implementation will do NOTHING to combat the growing problem of childhood and adolescent obesity, because it does not address the main CAUSES of obesity – poor diet and insufficient physical activity.

If you want to do something about childhood and adolescent obesity, do two things:

1. ELIMINATE junk food in schools (including the fat-laden meals that are served in the cafeterias), and
2. MANDATE and FUND physical education so that ALL children at ALL grade levels in ALL Montana schools receive the American College of Sports Medicine's recommended amount of physical activity – 30 minutes or more of moderate to vigorous physical activity on most days of the week. Its time that Physical Education was treated with the same regard as "Classroom Education."

Sincerely,

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NFL players at playing weight – (all presently inactive)	Offensive lineman: 6'6", 312 lb → BMI = 36.1 → obese
	Defensive end: 6'7", 264 lb → BMI = 29.7 → overweight
	Linebacker: 6'2", 243 lb → BMI = 31.2 → obese